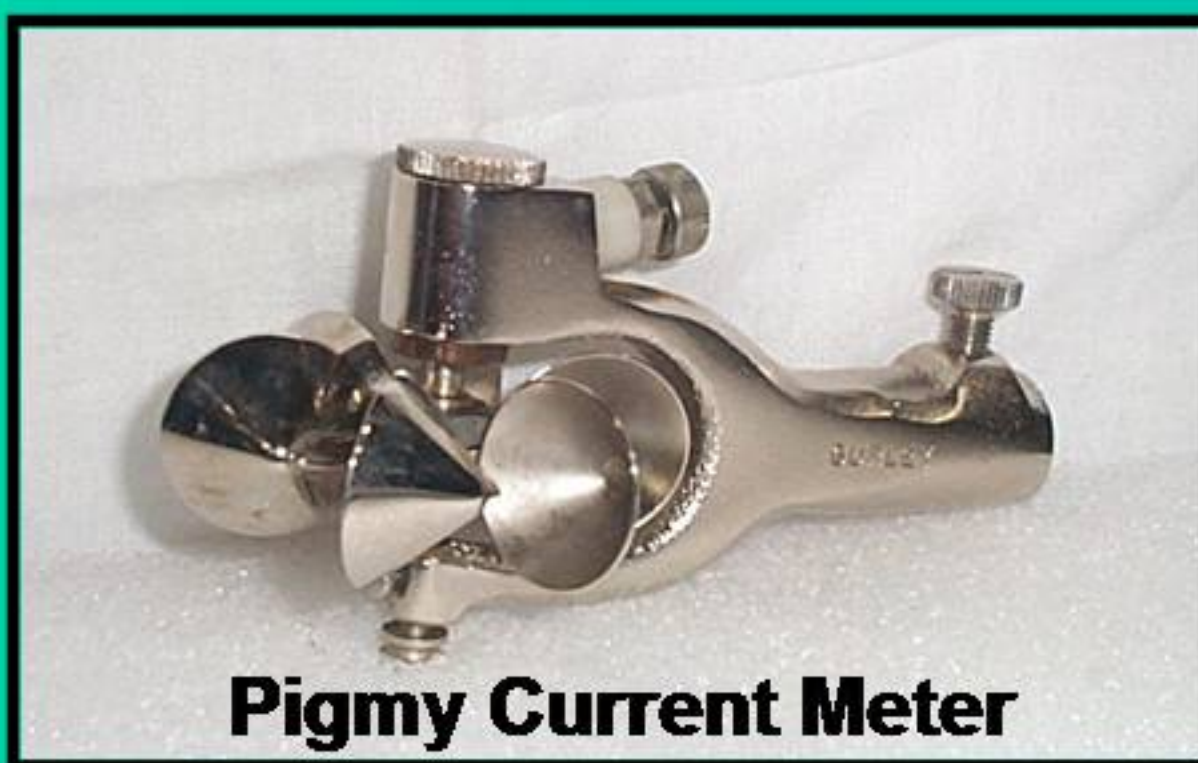


Field Flow Measurement Equipment

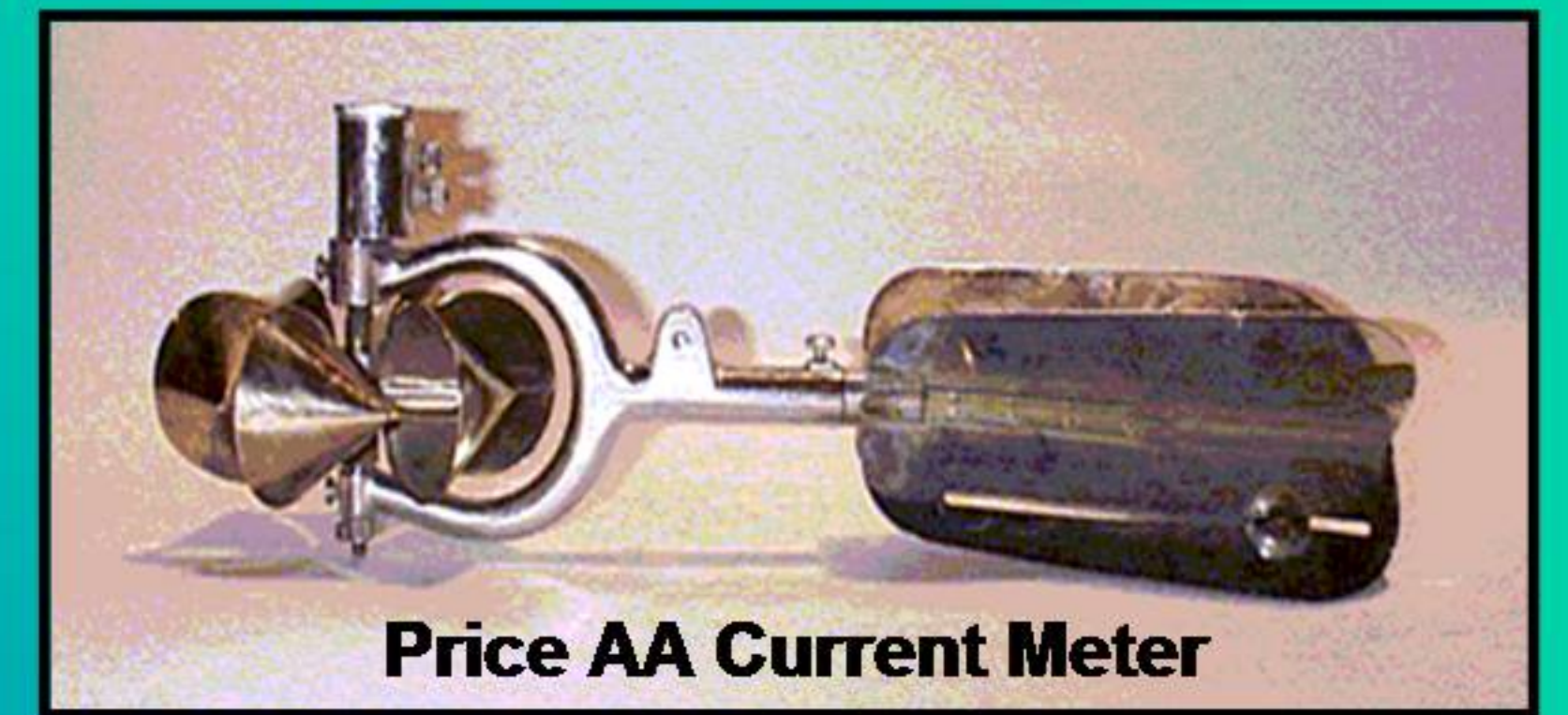
Purpose

These are equipment used by South Florida Water Management District to collect discharge measurements for the purpose of developing, calibrating and validating discharge rating equations at hydraulic structures.



Pigmy Current Meter

Mechanical Current Meters are instruments designed to measure the velocity of moving water in a river in order to determine its' discharge, also referred to as streamflow. These current meters were built according to a design by the late William Price, with a horizontally mounted "Bucket Wheel" which is rotated by the moving water. The rate of rotation of the bucket wheel on the current meter is proportional to the speed of the moving water at that particular point.



Price AA Current Meter

The Acoustic Doppler Current Profiler (ADCP) is a state-of-the-art flowmeter developed to measure the vertical profile of water velocity using acoustic waves. The instrument is equipped with transducers which transmit and receive acoustic waves. The waves are reflected off particles suspended in (and moving with) the water currents back to the ADCP.

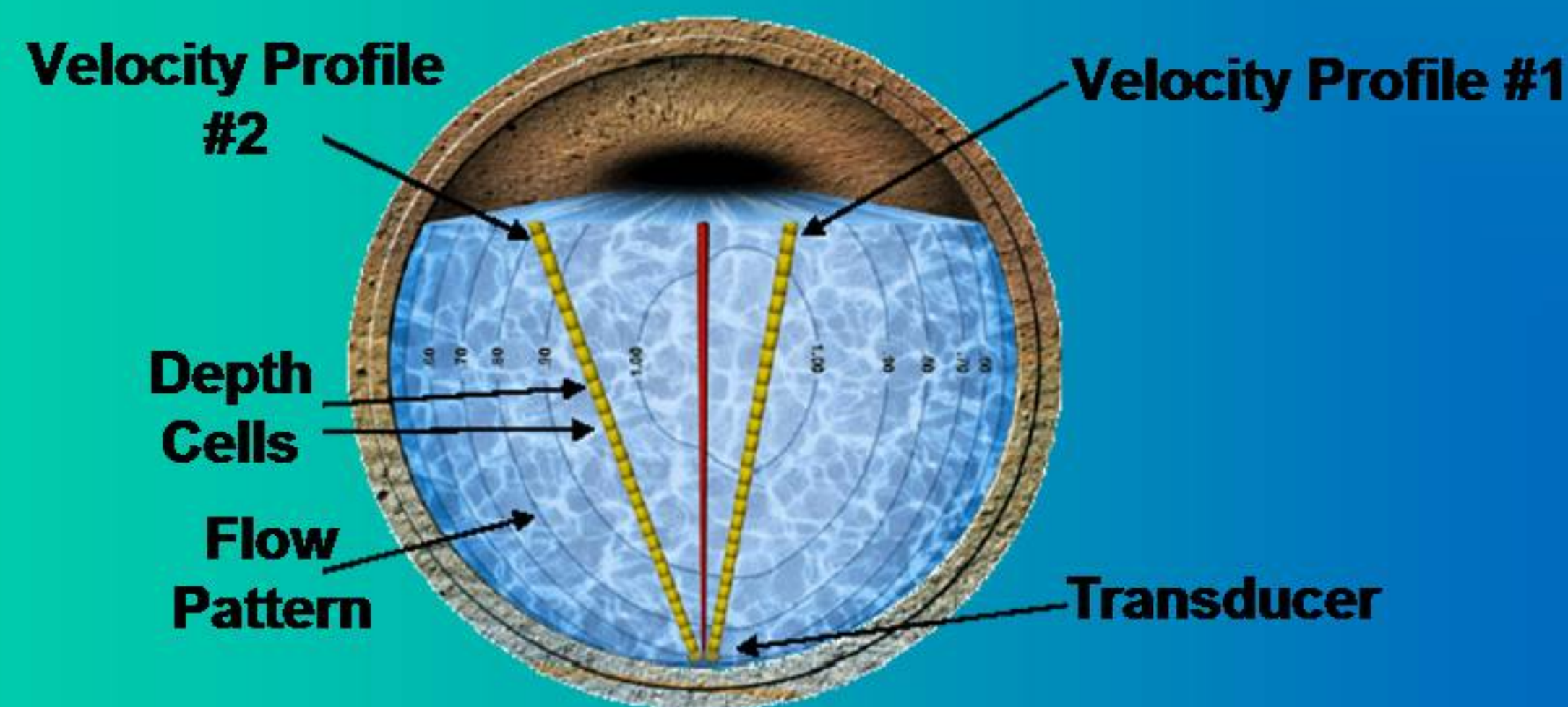


ADCP



GPS

A differential GPS is used with the ADCP to collect 3-D velocity measurements for the purpose of calibrating and validating hydrodynamic models and to obtain estimated boat velocity when bottom tracking is not possible.



SonTek's Acoustic Doppler Flow Meter (ADFM) measure flow in natural streams, concrete lined channels and pipes. This lightweight and compact system uses SonTek's Doppler technology to measure flow, velocity and water level. The system is designed to account for velocity variations with the channel to produce the most accurate flow calculation possible.

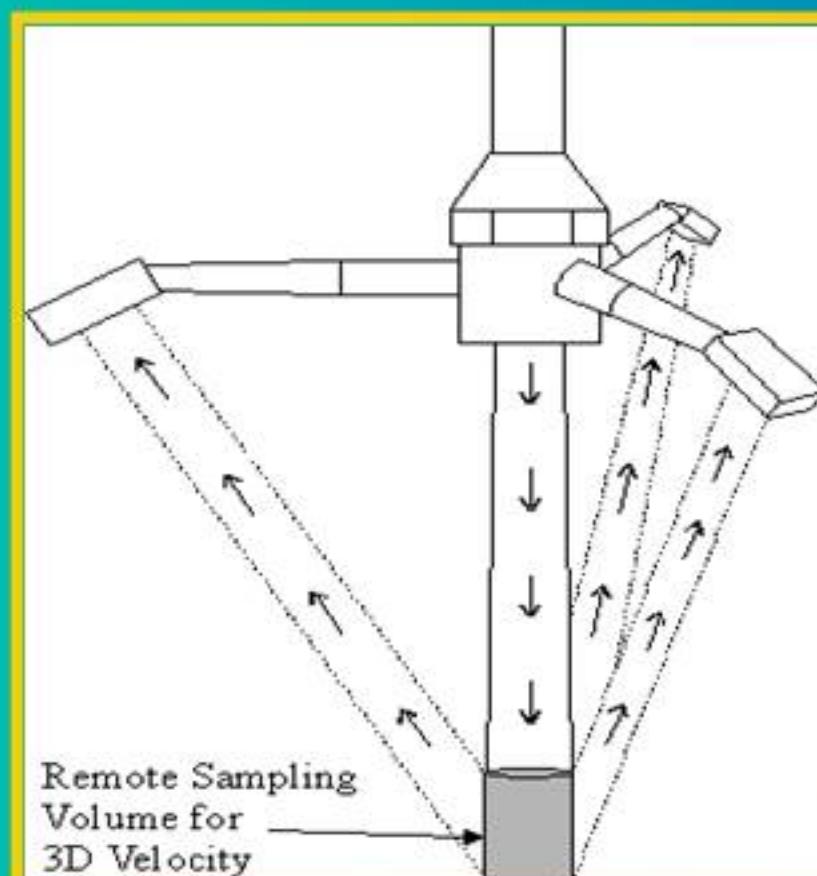


ADFM



FlowTracker

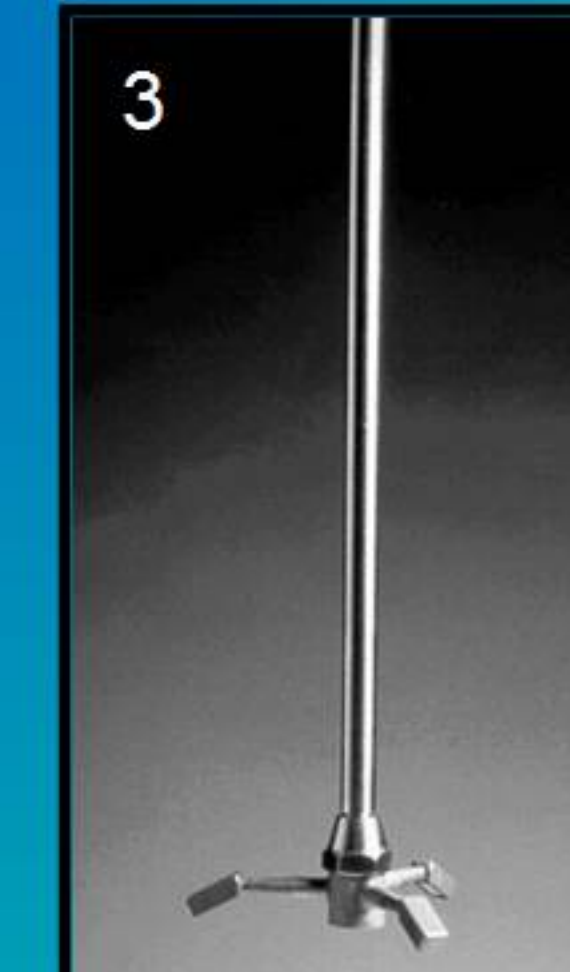
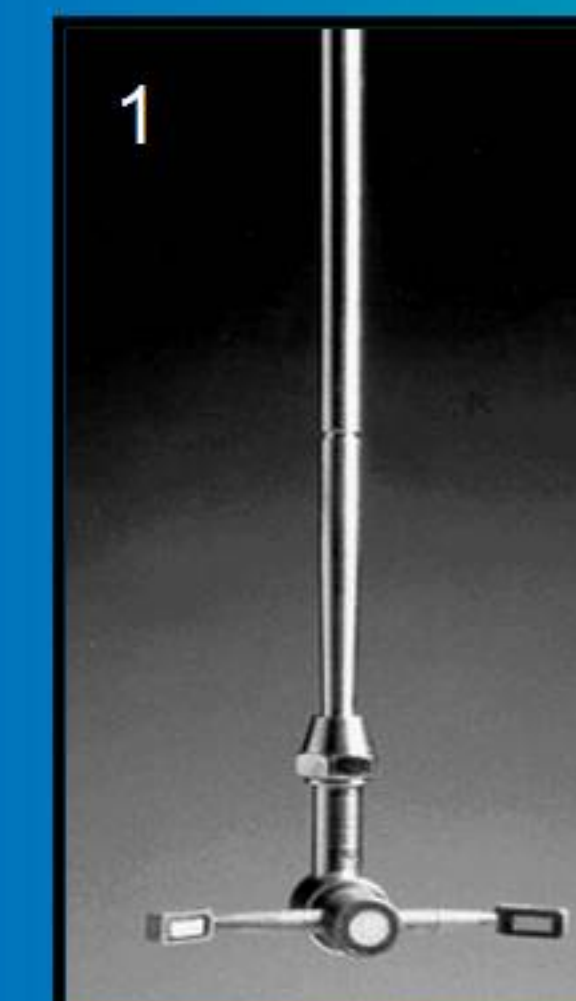
The SonTek/YSI Handheld FlowTracker is a single point 2-D Doppler current meter that measures water velocity in natural streams, weirs/flumes, and open channels related to irrigation, stormwater, water treatment, and mining. The FlowTracker is attached to a top-setting wading rod and features an automatic discharge computation program that is based on USGS/ISO methods.



The SonTek/YSI ADVField is a single-point 3-D Doppler current meter. It can measure velocity in a wide variety of settings from the laboratory to the ocean. The instrument is simple to set up and use.

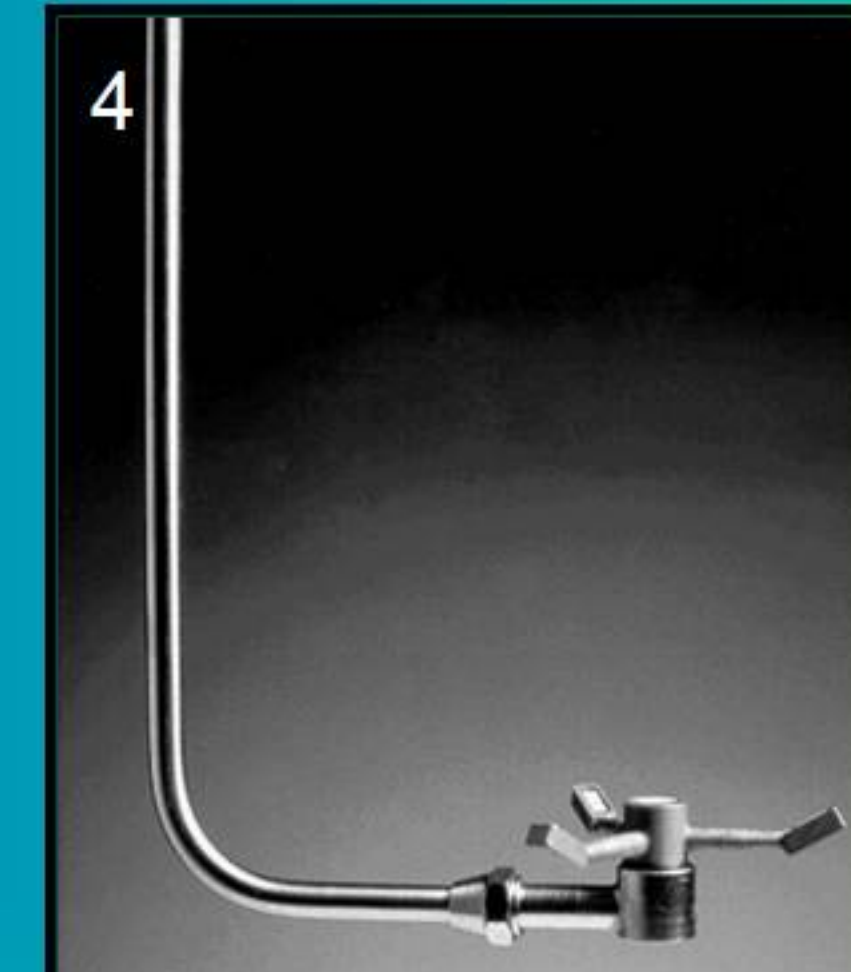


SonTek/YSI ADVField



5 types of ADV probes

1. Side Looking 2-D
2. Side Looking 3-D
3. Down Looking 3-D
4. Up Looking 3-D
5. Cable Mounted 3-D



PCADP

The Pulse-Coherent Acoustic Doppler Profiler (PCADP) applies pulse-to-pulse coherent processing that is used in Acoustic Doppler Velocimeters to ADP profiling applications.



Argonaut-SW

Argonaut-SW (Shallow Water) is ideal for monitoring flows in small channels from 1 ft (0.3 m) to 16 ft (5 m) deep. The Argonaut-SW offers advanced Doppler performance for sites previously thought impossible to measure. Typically mounted on the bottom of a channel, stream, or pipe, the SW measures water level and vertically-integrated velocity, making it ideal for sites with reversing or stratified flow conditions.



BoogieDopp

The BoogieDopp is a lightweight, easy-to-use Doppler system for measuring discharge in small rivers and canals. It can produce accurate results in flows ranging from just over 1 ft to more than 20 ft deep. It is designed for one-man operation, tethered from a tag line, pulley, bridge or walkway.



EasyQ

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